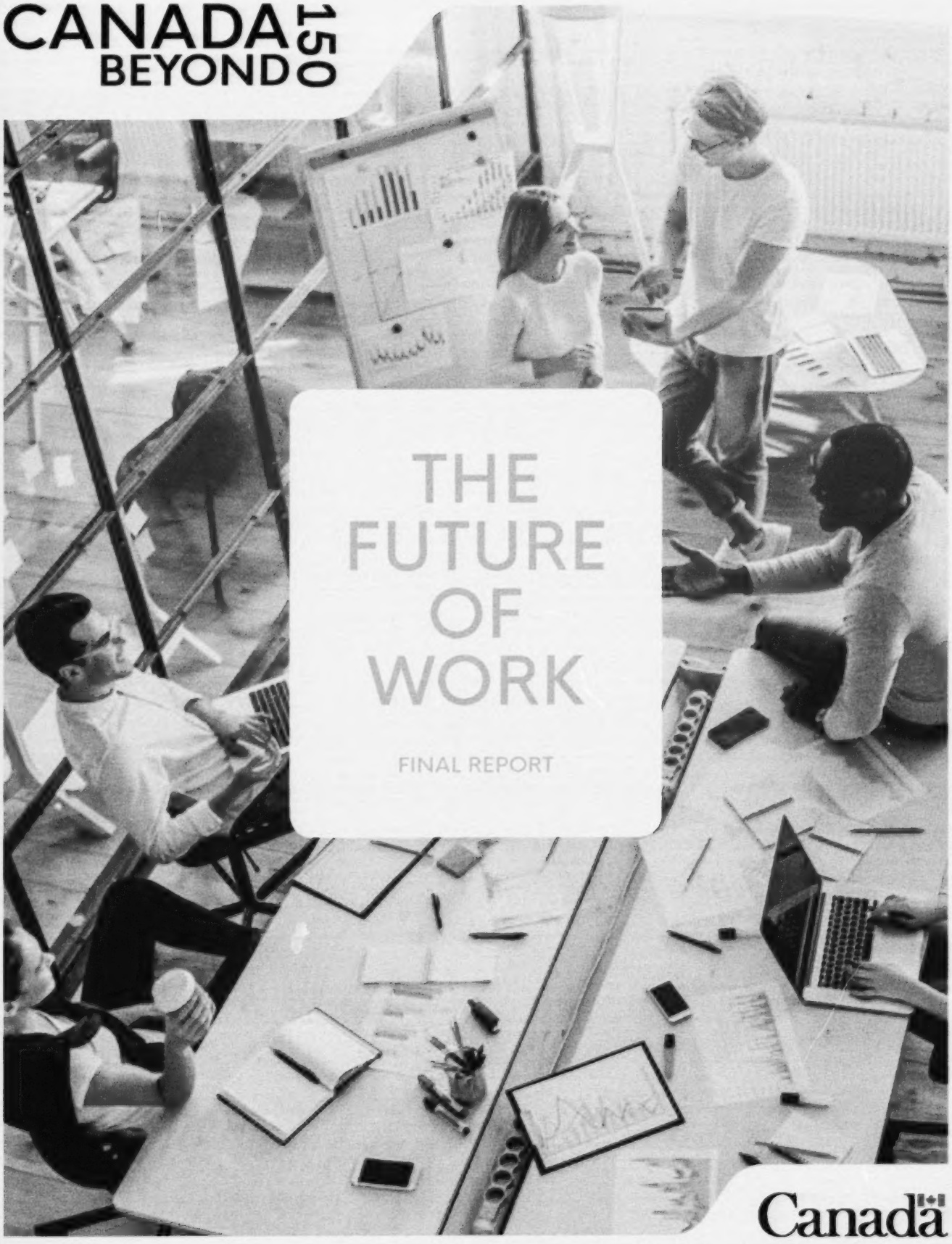
CANADA 150
BEYOND



THE FUTURE OF WORK

FINAL REPORT

Canada

THE FUTURE OF WORK

This document does not represent an official policy position of the Government of Canada. Instead, it records the work of a sub-group of new public servants who participated in Canada Beyond 150, a professional development program co-championed by the Privy Council Office and Policy Horizons Canada. The program was designed to support the development of new public servants, and to drive a culture change within the public service. The participants were invited to use foresight, design thinking and engagement tools to explore policy issues relating to diversity and inclusion.

SOCIO-ECONOMIC INCLUSION AND THE FUTURE OF WORK

The Government of Canada (GoC) has articulated the importance of addressing pressures of globalization, digital transition, and protectionism by focusing on socio-economic inclusion. These complex issues need a multidisciplinary approach that touches many areas.

As part of Canada Beyond 150, our nine-person interdepartmental team looked at the changing nature of work: how automation, telepresence, aging, identity, and capital and asset formation can lead to prosperity and social inclusion.

We considered the traits, tools, places, and composition of work; how we find work; how we develop skills in a digital age; the nature of firms; and the character of the social contract.

WE FOCUSED ON TWO MAJOR CHALLENGES FACING DIVERSITY AND INCLUSION IN CANADA:

1. The growing skills gap driven by increased automation.
2. The weakened social contract between workers, employers, and governments, driven by digital technologies and the constant financialization of business decisions, where performance is measured by short-term profits.

WE PROPOSE A MULTI-LEVEL *HUMAN CAPITAL STRATEGY* (SEE P.4):

1. An Interactive Career Platform that uses technology to help Canadians from all walks of life, and
2. A Workforce Stewardship Policy Suite that uses the unique ability of employers to positively affect their employees' lives.

WHAT'S CHANGING IN THE NEXT 15 YEARS?

Through regular scanning and research, our team looked at shifts in the world of work to understand the changing landscape. The selected insights below provide an educated look at some plausible changes, based on current structures and weak signals of change.

Virtual reality (VR) and telepresence may transform work: Greater adoption of VR will continue due to its broad range of possible applications, increased ease of use, and reduced cost. Combined with advancement in robotics, VR may separate where we work from where we live, slowly displacing national service sectors with global ones. This could cause a global merging of wages, affect the number and types of jobs in Canada, and challenge today's tax and labour laws. VR may raise productivity by growing and improving simulation, collaborative platforms, and data visualization. The decreasing need for physical spaces could reduce travel needs and change the demand for and design of cities. VR could also increase access to education, services, and entertainment for those who currently have limited access. People may build and spend time in virtual communities, creating parallel worlds, social movements, and economies of virtual goods and services.

Artificial intelligence (AI) may disrupt human resources management and workforce composition: Companies are using AI to make complex, value-based hiring decisions. Using software for decision-making in traditionally "grey" areas may displace knowledge-workers in both private and public sectors. The declining economic value of academic credentials (decredentialization) may accelerate, as AI could better assess candidates through various method. Precarious contracts may grow as work and skills are unbundled and rematched more seamlessly by AI. Displaced workers might seem to benefit from

this, but may actually face increased instability in this gig economy, where contractors are used for short-term positions rather than permanent hiring arrangements. In the gig economy, the traditional career with employer benefits fades into multiple income streams.

Seniors' continued labour market participation could increase competition: More seniors are supplementing their retirement income with flexible, part-time work in the gig economy. Their extensive experience and networks, access to savings, and the ability to secure capital have made older entrepreneurs more likely than ever to succeed. Seniors may hold opportunities for younger workers. Age-inclusive corporate policies could become common with a growing number of businesses capitalizing on senior-specific skills. Governments may implement policies and programs to keep older workers working to increase economic and societal benefits.

Career ladders are becoming career lattices: According to Barclays, 24% of workers under 34 have already worked in four industries, while 59% over 65 retired with three or less. The career lattice is characterized by constant skills learning and updating, steeper learning curves, and change management. Labour could become more transient, potentially impacting community cohesion but perhaps raising understanding between diverse groups. The future of vulnerable groups may worsen if governments don't adapt skills training, redefine skilled immigration, and shift curricula to prepare Canadians for the career lattice and lifelong learning. If individuals can't cope, reactionary political movements could form, threatening inclusion.

Reputation capital could be a new asset that reaches beyond employability: Our growing digital footprint can be combined to form a robust online reputation, a tangible asset increasingly measurable by AI. In an individualized job market, a strong online reputation can benefit job seekers without traditional credentials: employers might find ratings on Stack Overflow, an online community for programmers, more useful than traditional computer science degrees. Reputation building could become a new kind of unpaid work to access labour markets. Two-way rating plans could improve transparency and reduce gaming the system. Reputation brokers may rise as reputation crimes take on new significance. Managed well, this increasing transparency could lead to a more honest and pro-social society; while unwarranted surveillance, self-censorship, and inauthenticity could lead to government or corporate dystopia.

WHAT COULD BE DONE?

We engaged multiple stakeholders, from the education, private, and employment services sectors, to look at how these insights could lead to potential policy challenges and opportunities. Some team members had the opportunity to visit VR, AI, and Augmented Reality (AR) companies to see the potential of these technologies in creating a more inclusive Canada.

BASED ON THESE EXCHANGES, WE FOCUSED ON SIX POLICY AREAS FOR FURTHER STUDY:

1. **Wages and other benefits may become less secure**, leading to financial instability and uncertainty for more Canadians;
2. **Possible challenges to conventional government supports** to address basic needs in the future;
3. **Rise in global telework within service sectors** could disrupt labour mobility, labour rights, pay equality, and the Canadian tax base;
4. **The gap between traditional education systems and the labour market** could grow with increasing automation and digitization, inadequately preparing Canadians for meaningful participation in the future world of work;
5. **Less access to opportunities** from the changing labour market could favour wealthier, highly educated, and urban workers, and disfavour vulnerable, nonurban, and marginalized populations; and
6. **Reputation systems could become more common**, shaping human interactions, work prospects, and relationships, which could lead to identity loss and further marginalization.

FROM THESE POLICY AREAS, THE TEAM'S CO-CREATION SESSION WITH EXPERTS AND PRACTITIONERS WORKING ON THESE ISSUES BROUGHT A NUMBER OF POTENTIAL POLICY DIRECTIONS, INCLUDING:

1. **A national K-12 curricula standard based on soft skills**, so that a skill (critical thinking) becomes the goal, and courses (algebra) become vehicles to achieve that goal;
2. **Better use of Employment Insurance** to encourage continuous learning rather than simply an income replacement;
3. **An awareness campaign for learning**, similar to ParticipACTION;
4. **Use of existing frameworks** such as the Council of Ministers of Education Canada's Reference Framework for Successful Student Transitions;
5. **Pan-Canadian leadership** around standards for career development, so career services are standardized, accountable, and accessible to all ages; and
6. **An aspirational policy that promotes private investment in human capital**, which defines decent work and tries to increase and fairly share productivity.

A HUMAN CAPITAL STRATEGY FOR CANADA

The future of work demands a collective effort to achieve diverse and inclusive growth. In response, we propose a two-part strategy to improve the resilience of the Canadian workforce. Each part of the proposal includes interventions that could be effective alone, but we believe the strategy's true value lies in the combined effects of the two.

HARNESSING TECHNOLOGY:
AN INTERACTIVE CAREER PLATFORM

As technology disrupts skills and labour that are required in the workplace, Canadians will need to engage in lifelong learning to have a fulfilling set of careers. Government can help Canadians gain the competencies they need for future workplaces and facilitate work-related transitions. This could lead to greater employment consistency, better matching of people to jobs, and inclusive growth.

The Platform could use technological advancements to help Canadians at every stage of their working life. This data-driven platform is a coordinated approach that includes three areas: identifying, measuring and validating competencies; work and training exploration; and individualized matching.

Identifying, measuring and validating competencies are key to unlocking Canada's leadership position in the future of work. Pairing tasks with verified human competencies is crucial to improved work matching and skills development.

A competencies-based approach embraces different ways of learning and fosters greater labour market inclusion by recognizing competencies gained through international learning, traditions, cultures, and lived experiences. The Platform could identify and assess a user's skills using an integrated system of AI tests, peer reviews, and endorsements. A user's competencies would be measured, scored, and badged, visually displaying their entire portfolio of hard and soft skills. Strengthening "soft skills" would be a priority, as these will not be easily replaced by technology, and could retain their value in the future.

The same AI could unbundle and translate new and existing jobs into competencies. Building upon the FutureSkills Lab foundation, this Platform could combine government, industry, and education expertise to better identify new skills and support training.

Work exploration and lifelong learning could be VR-enabled, to provide immersive job shadowing and career exploration, and better recommendations. Canadians could experience different workplaces in VR or AR, to better understand a job and its requirements. Networks, geography, safety and privilege often determine the exposure people have to work. As people may change jobs more often in the future, broader exposure could help them tap into the unknown and influence skills training and decision-making.

Labour market information and projections could be added to the Platform that lets AI advisors provide interactive career advice, giving users greater access. This could include a technology resilience rating and an annual career health check-up that identifies work goals and training plans. Human career counsellors could help people in crisis make a viable plan through telepresence.

Better work and training matching through the Platform could lower onboarding and hiring costs, reduce vacancy times, fill skills shortages, and improve new hire success rates. Work matching could use an individual's portfolio of badged competencies to identify "high-fit" career transitions. "Near-matching" may improve firm outcomes, reducing damages from incorrect or over-specific requirements.

The Platform could use AI to make tailored training recommendations based on a user's verified competencies, career exploration data, personality, access, geography, income, and the activity's ability to reduce barriers to lifelong learning. This could lower the time needed to gain benefits, reducing opportunity costs and encouraging uptake. Further activities would be recommended throughout an individual's life, and users could have competencies re-assessed after training to increase badge level and support continuous learning.

The Platform could ease labour market transitions, reduce unemployment periods, and increase Canadian labour force resilience. Canadians would be better prepared for a future that includes frequent job transitions, labour market uncertainty, and a focus on skill development and adaptation. A platform approach allows components to be added and changed over time, providing a robust policy response that is ready to face unknown future challenges. Components might include em- ployer badging to support workforce stewardship, unpaid work, international remote-working opportunities, and greater immersion using virtual and augmented reality.

BEYOND PROFITS:
A WORKFORCE STEWARDSHIP POLICY SUITE

Decades of thinking that technology determines the development of society, along with limited policy action, have damaged the foundation of the Canadian workforce in times of disruptive change. The social contract, meant to provide equitable treatment of labour, is eroding–which is contributing to loss of security for Canadian workers. Current corporate systems discourage employers from supporting the well-being of their employees, thus breaking down social unity through economic exclusion.

Workforce stewardship are deliberate behaviours demonstrated by an employer to increase the wellbeing of workers, such as hiring employees instead of contractors, providing benefits, adopting diverse hiring practices, investing in workplace training, and practicing supplier-diversity.

This Policy Suite is meant to encourage businesses to consider both financial and social returns in their decision-making, and boost private investment in human capital. We present the following five ideas for further study by policy makers.

Communications: Shifting culture always starts with introducing language and sparking discourse. Innovation Canada can directly influence employer behaviour by adding "workforce stewardship" as a filter on its Advisory Services Concierge. It could also separate the existing "wage/training" filter into two distinct categories in its Funding Resources Concierge.

Employer-focused labour market funding to help businesses become better employers: For example, even great networks like Futurpreneur Canada and the Canada Business Network have almost no resources that would encourage employers to adopt positive human resources practices. Funding business networks for the development of a workforce stewardship toolbox could fill the gap, which would include courses like employer GBA+ training. Some courses could even be mandatory as part of a business's incorporation process.

Procurement influence: As the largest buyer of goods and services in Canada, the GoC is in the best position to nudge businesses and reward positive behaviours through public procurement. Building on its existing supplier diversity strategy targeted at women-led businesses, Public Services and Procurement Canada could explore ways to encourage behaviour by explicitly scoring vendors on workforce stewardship.

Better data: Statistics Canada and Employment and Social Development Canada could use technology to reduce the administrative cost of collecting data. Working with provincial, territorial, and indigenous governments, the GoC could create an AI-enabled, standardized database and user interface for

existing and future labour market programs to allow automatic data collection. The reduced burden could encourage employers to participate in existing programs, while producing better data for the interactive Career Platform to badge employers. Data consistency and visibility would allow easy comparison. Accreditation may lead employers to become even better stewards of their workforce.

Legal and regulatory changes: Areas for action could include Canada Revenue Agency (CRA)'s enforcement power, the Canada Labour Code's relevance to the growing digital and platform economies, and the real and perceived risks of bankruptcy. Companies over $5 million facing bankruptcy can restructure their business through the Companies' Creditors Arrangement Act, facing fewer issues for weighing non-financial considerations. Small and Medium Enterprises (SMEs) do not benefit from this program, making it harder for SMEs to become good workforce stewards. In turn, this harms Canadians, as the latest statistics show that SMEs employed 90% of the private sector workforce in 2015. New solutions could include looking at debt-credit or pardon for bankrupt businesses that have shown workforce stewardship. With more awareness of various options and reduced stigma around bankruptcy, employers could be in a better position to see themselves as social actors, instead of being pressured to focus solely only their financial returns.

WHAT SUCCESS MIGHT LOOK LIKE

Close measures might include measuring workplace training and well being metrics in current recurring surveys such as the Labour Force Survey and National Household Survey, or higher site traffic to workforce stewardship resources. Developing a Workforce Stewardship Policy Framework as the base for the other parts of the Policy Suite could be a concrete result of this.

THE WAY FORWARD

Canada Beyond 150 was designed to drive a culture shift across the public service, and we believe that we started scratching the surface of that shift. We challenged traditional thinking around jurisdictional challenges by standing firmly behind our belief that these are Canadian issues. We acknowledge the realities of working across jurisdictions; but we recognize and reiterate the uniting power of the federal government that could be harnessed in a Canada that champions socio-economic inclusion.

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